UNITED STATES PATENT AND TRADEMARK OFFICE

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09/431,357	11/01/1999	PRASAD Y. CHEBROLU	2705-92	8571

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application 09/431,357	Applicant(s) CHEBROLU, PRASAD Y.
Office Action Summary	**Examiner** Andrew Caldwell	**Art Unit** 2151

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-9 and 11-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-7,13-15 and 17* is/are allowed.

6)☒ Claim(s) *1-4,8,9,11,12 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 November 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1
2   *Remarks*

3   Claims 1-9 and 11-17 are pending.

4

5   *Specification*

6   The abstract of the disclosure is objected to under 37 C.F.R. 1.72(b) because (a)

7   it does not describe the nature or gist of the claimed invention and (b) it is more than

8   150 words in length. The abstract does not describe the feature added to claim 5 in the

9   response filed on February 12, 2003 (i.e., the determining if existing calls are below a

10   predetermined usage threshold and the subsequent migration of those calls to other

11   network access servers).   Correction is required. See MPEP § 608.01(b).

12

13   *Drawings*

14   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

15   every feature of the invention specified in the claims. Therefore, the following must be

16   shown or the feature(s) canceled from the claim(s): (a) an access server having

17   associated channels carrying incoming digital or analog traffic; (b) the determining if

18   existing calls are below a predetermined usage threshold and the subsequent migration

19   of those calls to other network access servers. No new matter should be entered.

20   A proposed drawing correction or corrected drawings are required in reply to the

21   Office action to avoid abandonment of the application. The objection to the drawings

22   will not be held in abeyance.

23

1   *Oath/Declaration*

2   This application presents a claim for subject matter not originally claimed or

3   embraced in the statement of the invention. Neither the summary of the invention nor

4   the originally filed claims mentioned: (a) the migration of existing calls to other network

5   servers per claim 1; (b) a channel usage monitor determines if existing calls are below a

6   predetermined usage threshold; (c) migrating to other network servers those existing

7   calls below the usage threshold as determined by the channel usage monitor. A

8   supplemental oath or declaration is required under 37 CFR 1.67. The new oath or

9   declaration must properly identify the application of which it is to form a part, preferably

10   by application number and filing date in the body of the oath or declaration. See MPEP

11   §§ 602.01 and 602.02.

12

13   *Claim Rejections - 35 USC § 103*

14   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

15   obviousness rejections set forth in this Office action:

16   (a) A patent may not be obtained though the invention is not identically disclosed or described as set
17   forth in section 102 of this title, if the differences between the subject matter sought to be patented and
18   the prior art are such that the subject matter as a whole would have been obvious at the time the
19   invention was made to a person having ordinary skill in the art to which said subject matter pertains.
20   Patentability shall not be negatived by the manner in which the invention was made.
21
22
23
24
25   Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

26   White et al., U.S. Patent No. 5,933,490, in view of Fratto, M., More than Throughput:

27   Managed Modem Chassis, Network Computing, vol. 7, no. 17, pp. 1-5, Nov. 1996,

1   and further in view of Carson et al., U.S. Patent No. 4,629,832, and further in view of

2   Service Provider Dial Scenarios and Configurations,

3   www.cisco.com/univercd/cc/td/doc/product/software/ios113ed/113ed/cr/dial_c/dcprt0

4   /dcspex.pdf, pp. DC13 to DC56, January 1998, hereinafter "the Cisco Reference."

5

6   Regarding claims 8 and 11, they are rejected for the reasons given in the last

7   Office action. The newly added limitation to claim 8 creates, through its use of the

8   word "may," a situation where the migration of existing calls is optional. Existing

9   calls may be migrated to other access servers but they do not have to be migrated.

10   The Applicant clearly knows how to write a claim where migration is required, since

11   claims 1, 13, 16, and 17 all make the migration of existing calls mandatory. The

12   examiner has therefore presumed that this difference in claim language is

13   intentional. In stating reasons for the rejection for this claim, the examiner chooses

14   to apply a combination directed to the option where existing calls are not migrated.

15

16   Claims 1-4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

17   over White et al., U.S. Patent No. 5,933,490, in view of Fratto, M., More than

18   Throughput: Managed Modem Chassis, Network Computing, vol. 7, no. 17, pp. 1-5,

19   Nov. 1996, and further in view of Carson et al., U.S. Patent No. 4,629,832, and

20   further in view of Service Provider Dial Scenarios and Configurations,

21   www.cisco.com/univercd/cc/td/doc/product/software/ios113ed/113ed/cr/dial_c/dcprt0

22   /dcspex.pdf, pp. DC13 to DC56, January 1998, hereinafter "the Cisco Reference,"

1   and further in view of Hasler, J., Re: How to Establish a Semi-Permanent Dial-Up

2   Connection?, lists.debian.org/debian-user/1998/debian-user-

3   199812/msg03897.html, pp. 1-2, December 31, 1998.

4

5   Regarding claim 1, the preamble will be given patentable weight since the claim

6   body refers back to the preamble at line 6. See *the service request switch*. White

7   teaches the invention substantially as claimed by disclosing an access server (Fig. 7

8   elems. 96 & 98) having associated channels (Fig. 7 elem. 94) carrying incoming

9   digital or analog traffic (col. 15 lines 15-16), the access server being operatively

10   coupled with a service request switch (Fig. 7 elem. 54; Col. 15 lines 13-35).

11   White does not teach the method steps listed in lines 4-12 of claim 1.

12   Fratto on the other hand teaches an access server with the ability to busy out all

13   modems (i.e., associated channels) of a server when a system manager manually

14   initiates preventive maintenance (p. 3 5th complete paragraph). Fratto therefore

15   teaches the method step of a system manager manually determining whether off-line

16   maintenance is needed on a network access server and, if so, suggests the general

17   idea of busying out the modems/channels prior to taking the access server offline for

18   maintenance. Fratto also teaches that network access servers, prior to peforming

19   maintenance, disconnect, currently connected users (p. 2 disconnecting users prior

20   to configuration upgrade).

21   It would have been obvious to one of ordinary skill in the art at the time the

22   invention was made to combine the teachings of Fratto with the access server of

1   White because of Fratto's teaching that this capability is a *basic* modem

2   management function (p. 3 5th complete paragraph).

3   The combination of White in view of Fratto does not teach the specific steps of

4   busying out the system, which are:

5   Communicating a busy condition of any unused associated channel from

6   the network access server to the service request switch;

7   Monitoring any used associated channel for either of a digital and an

8   analog call thereon and waiting until the used associated channel becomes

9   substantially unused as indicated by defined digital and analog signaling

10   protocols comprehended by such monitoring, and migrating any existing calls

11   other network access servers;

12   When the unused associated channel becomes substantially unused as

13   indicated by such defined digital and analog signaling protocols comprehended

14   by said monitoring, communicating a busy condition of such then-unused

15   channel from the network access server to the service request switch;

16   Signaling that maintenance on the network access server can be

17   performed;

18   Automatically routing any new client service requests that may arrive

19   during a busy condition of the network access server to another network access

20   server operatively coupled with the service request switch.

21   Carson on the other hand teaches a method for busying out the channels of a

22   network device (Col. 10 line 56 to Col. 11 line 24), comprising:

1   Communicating a busy condition of any unused associated channel from

2   the network device to the service request switch (Col. 10 lines 57-61);

3   Monitoring any used associated channel for either of a digital and an

4   analog call thereon and waiting until the used associated channel becomes

5   substantially unused as indicated by defined digital and analog signaling

6   protocols comprehended by such monitoring (Col. 11 lines 9-12; Fig. 5 loop

7   between elem. 511 no path and elem. 520 no path shows the system looping or

8   waiting until the CO line is idle);

9   When the unused associated channel becomes substantially unused as

10   indicated by such defined digital and analog signaling protocols comprehended

11   by said monitoring, communicating a busy condition of such then-unused

12   channel from the network access server to the service request switch (Fig. 5

13   elems. 510-513; Col. 10 line 56 to Col. 11 line 16);

14   Signaling that maintenance on the network device can be performed (Col.

15   11 lines 12-16 audible alert).

16   It would have been obvious to one of ordinary skill in the art at the time the

17   invention was made to modify the combination of White in view of Fratto by

18   substituting Carson's specific teachings for busying out a network device for the

19   combination's general teaching of busying out the network access server, thereby

20   teaching the invention as claimed. This combination would have been obvious

21   because of Carson's teaching that its method reduces interruptions to users of the

22   system (Col. 1 lines 19-24).

1   The combination of White in view of Fratto and further in view of Carson does not

2   teach a method wherein new client service requests that may arrive during a busy

3   condition of the network access server are automatically routed to another network

4   access server operatively coupled with the service request switch and migrating any

5   existing calls other network access servers.

6   The Cisco reference on the other hand teaches a system wherein the channels

7   of a hunt group are allocated across multiple access servers (p. DC-28 Fig. 13; pp.

8   DC-45 to DC-46 describing the purpose of a hunt group).

9   It would have been obvious to one of ordinary skill in the art at the time the

10   invention was made to spread the channels of the hunt group of the combination of

11   White in view of Fratto and further in view of Carson as taught by the Cisco

12   reference because doing so would increase the reliability of the system. In such a

13   system, any new client service requests that may arrive during a busy condition of

14   the network access server are automatically routed another network access server

15   operatively coupled with the service request switch.

16   The combination of White in view of Fratto I and further in view of Carson and

17   further in view of the Cisco Reference therefore teaches all features of the claimed

18   invention except for the step of migrating any existing calls other network access

19   servers.

20   As to the limitation of migrating any existing calls to other network access

21   servers, the combination of White in view of Fratto and further in view of Carson and

22   further in view of the Cisco Reference teaches that any connected users that are

1   currently connected will be disconnected prior to performing maintenance. See the

2   discussion of Fratto above. So the combination of White in view of Fratto and further

3   in view of Carson and further in view of the Cisco Reference teaches a method

4   wherein connections that do not eventually terminate at the client/user's initiative are

5   eventually disconnected.

6   Hasler on the other hand teaches a system for generating a semi-permanent dial

7   up connection that will automatically dial up a user's ISP and reestablish the

8   connection if the line goes down (pp. 1-2). Hasler therefore teaches that some users

9   remain semi-permanently connected to their ISP.

10   It would have been obvious to one of ordinary skill in the art at the time the

11   invention was made to combine Hasler's teaching regarding a semi-permanent dial

12   up connection with the client of White. This combination would have been obvious

13   because it eliminates the user having to manually initiate the connection (Hasler p.

14   1). In the resulting combination, the remote access server would terminate the semi-

15   permanent connection when it initiates maintenance. The client would reestablish

16   the semi-permanent dial up connection by dialing the hunt group, and the connection

17   would be automatically routed to an available remote access server in the hunt

18   group. The combination therefore teaches a method that migrates any existing calls

19   other network access servers.

20   Regarding claim 2, the combination of White in view of Fratto and further in view

21   of Carson and further in view of the Cisco Reference and further in view of Hasler

22   teaches the invention substantially as claimed. See the rejection of claim 1 above.

1   The combination as applied to claim 1 above does not teach the additional step of

2   claim 2. Carson on the other hand teaches a method, which after completion of the

3   maintenance, further comprises communicating an idle condition of any associated

4   channel to the service request switch (Col. 1 lines 51-54). It would have been

5   obvious to one of ordinary skill in the art at the time the invention was made to

6   combine Carson's teaching regarding returning the state of the channels to idle after

7   completing maintenance with the method of the combination of White in view of

8   Fratto and further in view of Carson and further in view of the Cisco Reference and

9   further in view of Hasler because returning the channels to the idle state allows the

10   network access server to receive calls again, and thereby perform its intended

11   function.

12   Regarding claim 3, the combination of White in view of Fratto and further in view

13   of Carson and further in view of the Cisco Reference and further in view of Hasler,

14   as applied to claim 2 above, teaches the invention substantially as claimed. The

15   combination of White in view of Fratto and further in view of Carson and further in

16   view of the Cisco Reference and further in view of Hasler does not explicitly teach

17   the additional limitation of claim 3. White does however teach that the central office

18   switching system is connected to the access server via POTS or plain old telephone

19   service connections (Col. 15 lines 13-16). Official notice is hereby taken of the fact

20   that POTS connections use a standard signaling protocol to communicate the status

21   of associated channels. White therefore teaches a system in which a standard

22   communication protocol is used to communicate between the network access server

1   and the service request switch. It would have been obvious to one of ordinary skill in

2   the art at the time the invention was made to use the standard signaling protocol to

3   communicate the busy/idle condition of any associated channel of the network

4   access server to the switch because doing so increases the interoperability of the

5   network access server, allowing it to be connected to the switches of different

6   manufacturers.

7   Regarding claim 4, the combination of White in view of Fratto and further in view

8   of Carson and further in view of the Cisco Reference and further in view of Hasler as

9   applied to claim 1 above teaches a system in which both network access servers are

10   in the same hunt group. See the discussion of the Cisco Reference above.

11   Regarding claims 16, it is a computer-readable medium claim corresponding to

12   method claim 1. Since it does not teach or define above the information in the

13   corresponding method claim, it is rejected under the same basis.

14

15

16   Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

17   White in view of Fratto and further in view of Carson, and further in view of the Cisco

18   Reference, and further in view of Fratto, M., Accessing the Enterprise: Large-Scale

19   RAS to the Rescue, Network Computing, pp 1-8, April, 1999, hereinafter Fratto II, for

20   the reasons given in the last Office action.

21

22   *Allowable Subject Matter*

1   Claims 5-7, 13-15, and 17 are allowed.

2   The following is a statement of reasons for the indication of allowable subject

3   matter: As to claim 5, the prior art of record does not teach or suggest a combination

4   as claimed in which a channel usage monitor determines if existing calls are below a

5   predetermined usage threshold and wherein existing calls below the usage threshold

6   will be migrated to other network servers. Fratto II on page 5 describes how the Shiva

7   Corp. LanRover Access Switch handles firmware upgrades. Prior to initiating a

8   firmware upgrade, the modems may be busied out. However, once the firmware

9   upgrade process is initiated, all existing connections are dropped, regardless of whether

10 the connection is currently being used. Nothing in Fratto II suggests that only existing

11 calls below a usage threshold are migrated (i.e., their connections dropped so the user

12 is forced to redial and access another access server in the hunt group). By not

13 migrating calls above the usage threshold, a system according to the claimed invention

14 distinguishes between connections where the user is lingering (i.e., remaining

15 connected but not using the network) and those connections that are actively used. As

16 to claims 13 and 17, they all contain a language directed to the same feature and are

17 therefore allowed for the same reason. As to any claim not specifically discussed, it is

18 allowed because it depends on one of the claims discussed above.

19

20   *Response to Arguments*

21   Applicant's arguments filed on February 12, 2004 (paper no. 13) have been fully

22 considered but they are not persuasive.

1   As to the rejection of claim 1, the Applicant is arguing in substance that the

2   combination of White in view of Fratto I, Carson, and the Cisco Reference does not

3   teach: (a) the step of monitoring of both analog and digital calls according to their

4   respective protocols; (b) the step of automatically routing new calls to another network

5   access server in the hunt group; (c) the step of migrating calls to other network access

6   servers in order to busy out an active line with no interruption of service to the user.

7   As to point (a), claim 1 does not include the limitation of monitoring both analog

8   and digital calls according to their respective protocols. The step of monitoring in claim

9   1 cites digital and analog calls as alternatives, by its use of the word "either." Although

10 the claims are interpreted in light of the specification, limitations from the specification

11 are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057

12 (Fed. Cir. 1993). Furthermore, the assignee's own product, the Cisco AS5200, teaches

13 that a network access server accepting both analog and digital ISDN calls is known in

14 the art (Cisco reference p. DC-18).

15   As to point (b), the Applicant argues that the combination does not teach the step

16 of automatically routing new calls to another network access server in the hunt group.

17 This argument about the meaning of a hunt group shown in Figure 13 on page DC-28

18 ignores what the assignee's own reference teaches about the purpose of hunt groups.

19 The Cisco Reference teaches that a hunt group number is the only number that clients

20 dial into (p. DC-46). When a call is received, the telco switch searches for or hunts for

21 the first available channel on any of the attached network access servers (p. DC-46 and

22 Fig. 16 on p. DC-45). So in the combination of White in view of Fratto , Carson, and the

1   Cisco Reference, a network access server undergoing maintenance would have all lines

2   busy, since they would either be connected to a user or busied out. The telco switch in

3   the combination would therefore route the call to another access server in the hunt

4   group in which one of the lines is not busy. The Applicant then argues that the

5   combination could result in a situation where an incoming call is given a busy signal.

6   While the examiner concedes that this situation could occur when all lines to all access

7   servers in a hunt group are busy, the examiner argues that combination also teaches a

8   combination in which all lines to all servers are not busy.

9   As to point (c), the Applicant is arguing a limitation that does not appear in the

10   claim language. The claims say nothing about migrating a call *with no interruption of*

11   *the service to the user.* Although the claims are interpreted in light of the specification,

12   limitations from the specification are not read into the claims. See *In re Van Geuns*, 988

13   F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

14   The Applicants also argues with respect to claim 1 that Carson teaches away

15   from the claimed invention because it suggests that outside callers will receive a busy

16   signal and try again later, as opposed to having their call directed to another server in a

17   hunt group. This argument is not deemed persuasive. Carson is relied upon for its

18   teachings regarding the details of busying out of telephone lines. Carson is not relied

19   upon for any teachings regarding the distribution of calls across network access servers

20   in a hunt group, since Carson addresses the problem of maintaining a *single* system.

21   Since Fratto I explicitly teaches the busying out of telephone lines and Carson is relied

1   upon for teaching the details as to how this is carried out, the examiner concludes that

2   Carson does not teach away.

3   As to independent claims 8 and 16, the Applicant's arguments are the same as

4   those addressed above.

5   As to the rejection of claims 9 and 12, the Applicant is arguing in substance that

6   the combination of White in view of Fratto I, Carson, the Cisco Reference, and Fratto II

7   does not teach an automatic scheduler. See the Applicant's arguments at the bottom of

8   page 12 of the response. The examiner disagrees with the Applicant's characterization

9   of Fratto II. Fratto II use of the term scheduler suggests that it is a "thing." The

10   examiner reasonably inferred that this thing referred to as a scheduler by Fratto II is

11   known in the art. This conclusion is consistent with the Applicant's failure to disclose

12   any details of a scheduler in this application. When viewed in this context, it is clear that

13   Fratto II's statement suggests that one can either have personnel on hand to perform

14   maintenance or have the scheduler perform the maintenance. If the scheduler performs

15   the maintenance, it is without user intervention and therefore automatic.

16

17   *Conclusion*

18   A shortened statutory period for response to this action is set to expire **three**
19   **months** from the mail date of this letter. Failure to respond within the period for
20   response will result in **ABANDONMENT** of the application (see 35 U.S.C. 133, M.P.E.P.
21   710.02, 710.02(b)).
22
23   Any inquiry concerning this communication or earlier communications from the
24   examiner should be directed to Andrew Caldwell, whose telephone number is (703)
25   306-3036. The examiner can normally be reached on M-F from 9:00 a.m. to 5:30 p.m.
26   EST.
27

1   If attempts to reach the examiner by phone fail, the examiner's supervisor,
2   Glenton Burgess, can be reached at (703) 305-4792. Additionally, the fax numbers for
3   Group 2100 are as follows:
4
5   Fax Responses: (703) 872-9306
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7   Any inquiry of a general nature or relating to the status of this application should
8   be directed to the Group receptionist at (703) 305-9600.
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15   Andrew Caldwell
16   703-306-3036
17   April 17, 2004

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